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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/928,339	08/14/2001	Tokuju Oikawa	2870-0171P	6675
2292 7590 04/10/2007 BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			EXAMINER CHEA, THORL	
			ART UNIT 1752	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE		NOTIFICATION DATE	DELIVERY MODE	
3 MONTHS		04/10/2007	ELECTRONIC	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

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## Office Action Summary

Application No.

09/928,339

Applicant(s)

OIKAWA, TOKUJU

Examiner

Thorl Chea

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 08 January 2007.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-30 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

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### DETAILED ACTION

1. This office action is responsive to the communication on January 8, 2007; claims 1-30 are pending in this instant application.

#### *Claim Rejections - 35 USC § 112*

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1-30 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The specification fails to provide support for the language: "wherein the image-forming layer comprise polymer latex containing substantially no  $\text{NH}_4^+$ " presented in claim 1. There is no support for such language found in the specification, and the language raises the issue of new matter.

Page 57, lines 31-34 discloses "as the main binder in the layers formed on the image forming layer side of the support, the polymer latex is preferably used"; page 34, lines 11-13, discloses "it is preferred that even a photothermographic material satisfying Condition II should not contain ammonia in the layer formed on the image-forming layer side of the support. The expression of "not substantially containing ammonia" used here means that ammonia not intentionally added to

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each material or each coating solution”; and Table 1 and Table 2 disclose the use of sodium hydroxide and ammonium hydroxide as pH modifier, and  $\text{NH}_4^+$  is a cation derive form  $\text{NH}_4\text{OH}$ .

First, the section of the disclosure pointed out by the applicants fails to discloses the polymer latex is the main component of the image-forming layer, but “main binder in the layers formed on the image forming layer”; second the term “ammonia” does not mean the cation “ $\text{NH}_4^+$ ”. The ammonia ( $\text{NH}_3$ ) which is colorless gas which is a colorless gas, very soluble in water, forming ammonium hydroxide. Third, page 92, lines 1-4 discloses binder (SBR latex, glass transition temperature:  $17^\circ\text{C}$   $\text{K}_2\text{S}_2\text{O}_8$  was used as polymerization initiator). It fails to state whether the polymer latex containing substantially no  $\text{NH}_4^+$ . Moreover, the scope of “polymer the polymer latex containing substantially no  $\text{NH}_4^+$ ” encompasses beyond the scope of SBR exemplified therein.

The specification fails to provide support for the language : “wherein at least three protective layers re provided on the image-forming layer, and each protective layer comprise a polymer latex” in claim 28.

Page 63, lines 10-17, discloses “the protective layer is a layer provided on the image forming layer, and it may consist of two or more layers. In such a case, it is preferred that polymer latex should be used for at least one layer, especially the outermost protective layer. The specification on pages 93-95 disclose the coating solution for the protective layer, the coating solution for the lower overcoat layer and the coating solution for the upper overcoat layer.

Therefore, the specification fails to disclose at least three protective layers and each protective layer comprises a polymer latex. It discloses one protective layer, one lower overcoat layer and

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one upper overcoat layer. There are no more than three protective layer was disclosed at the time the invention was made.

The specification fails to disclose the limitation “wherein the image-forming layer is made of a coating solution comprising a pH modifier, wherein said coating solution contains substantially no  $\text{NH}_4^+$ ” in claim 29.

Page 34, lines 11-13, discloses “it is preferred that even a photothermographic material satisfying Condition II should not contain ammonia in the layer formed on the image-forming layer side of the support. The expression of “not substantially containing ammonia” used here means that ammonia not intentionally added to each material or each coating solution

The condition II is related to the layer formed on the image forming layer should not contains ammonia, not an image forming layer. Moreover, the term ammonia does not encompasses the scope of “ $\text{NH}_4^+$ ” which is an ammonium cation.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject

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matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-16, 18-30 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Japanese Patent NO. 112072 (JP'072).

The JP'072 discloses a photothermographic material contains a compound of formula (1), (2) and (3) in condition (I) and the compound of formula (II) claimed in the present claimed invention. See claims 1-4; paragraph [0098] to [0100] and Table 1 in paragraph [0285]. See also the use of polymer latex in [0196] to [0204]; the use of polymer latex in the protective layer in [0225]; the use of lubricant such as wax in [0227], and the heat-development apparatus page 1 of 1. The samples 12-14 contain NaOH as pH modifier. Thus, the samples contain no  $\text{NH}_4^+$  which is within the scope of 0.06 mmol/m<sup>2</sup> claims in the present claimed invention; the samples 6-11, 18-25 contains ammonium hydroxide which meet the limitation in condition "do not substantially contains" ammonia (i.e.  $\text{NH}_3$ ). Therefore, the invention as claimed lacks novelty. Alternatively, it would have been obvious to the worker of ordinary skill in the art at the time the invention was made to a known acid or base discloses in JP'072, paragraphs [0098] to [0100] to adjust the film surface pH of 5.5 or less to provide an invention with similar pH. The results presented in Table 1, [0285] shows low Dmin, sufficient shelf life in which Dmax is high. The worker of ordinary skill in the art would have to a base or an acid to control the film surface pH within this range with an expectation of achieving a material with highly improved fogging, low Dmin and high Dmax.

7. Claims 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Patent NO. 112072 (JP'072) as applied to claims 1-16, 18-30 above, and further in view of Ito et al and

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EP' 1096310. Ito et al in column 82 lines 16-30 discloses phosphorus oxide-derive compound as contrast enhancer for a photothermographic material. See also EP'310 on page 79, claim 8, and the control of film surface pH on page 52, paragraph [0200].

It would have been obvious to the worker of ordinary skill in the art at the time the invention was made to use the phosphorus oxide-derive compound taught in Ito et al and EP'310 as contrast enhancer for the material of JP'072, and thereby provide a material as claimed.

### ***Response to Arguments***

8. Applicant's arguments filed January 8, 2007 have been fully considered but they are not persuasive because of the reason set forth in the rejection above. The remained issue is the amount of  $\text{NH}_4^+$  contained in the photothermographic material. The applicants argue that the source of  $\text{NH}_4^+$  content derive from the preparation of the binder for the photothermographic material, and the amount presented in the claimed is critical since it would provide the photothermographic material with lower temperature and humidity dependency. The applicants rely on different declaration which shows that the amount of  $\text{NH}_4^+$  containing in LACSTARS 3370B disclosed in JP'072 is almost  $0.25 \text{ mmol/m}^2$ , whereas the invention as claimed is related to polymer latex containing an amount of  $\text{NH}_4^+$  of  $0.06 \text{ mmol/m}^2$  or less, and the  $\text{NH}_4^+$  content is not decided by the layer surface pH. The layer surface pH of a sample is varied depending upon type of acids or bases containing in the sample.

It is the Examiner's position that the argument is not persuasive. First, supposedly, the amount  $\text{NH}_4^+$  is derive from the preparation of the binder for the photothermographic material such as presented in the applicants' argument, the  $\text{NH}_4^+$  amount as claimed is considered as the impurity associated with the preparation of binder, and it does not have any utility in improving

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the photothermographic material, and supposedly, the removal thereof would provide the improvement of the property of the photothermographic material, this improvement would have been expected by the worker of ordinary skill in the art. Product which differs from the prior art only its purity is obvious when the pure product possesses unexpected properties not possessed by the impure one. Ex parte Steelmand 140 USPQ 189; Ex parte Gray 10 USPQ 2d 1922, 1925 (BPAI 1989). Second, the Declaration has little probative value since it is not consistent with the specification disclosure. There is nowhere in the specification disclosure showing that the source of  $\text{NH}_4^+$  inherently derives from the polymer latex such as the LACSTRAR presented in the argument. The results shown in the specification disclosure such as in Table 1 wherein the sample contains surface modifier other than  $\text{NH}_4\text{OH}$  contains less  $\text{NH}_4^+$  content. See samples 1-4, 1-9, 1-11.

### *Conclusion*

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,



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however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thorl Chea whose telephone number is (571) 272-1328. The examiner can normally be reached on 9 AM-5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia H. Kelly can be reached on (571)272-1526. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

tchea *tlh*  
March 22, 2007



Thorl Chea  
Primary Examiner  
Art Unit 1752